



In the last weeks of “Writing About Real Things,” Professor Keith Wilhite challenged us to contemplate “contested commodities”—commodities to which capitalism and

market forces are inherently unnatural. The obvious cases were those whose commercializations seem immediately perverse: love, sex, procreation, human organs, and human lives. Instead of writing about one of those topics, I chose to discuss a more abstract subject: intelligence. I have always been intrigued by the issue of educational inequality. Before college, I had moved seven times, lived in four states, and attended eight different elementary and secondary schools. Even where the cultural differences were negligible, I noticed dramatic disparities in the quality of the public education systems. However, when I decided to write about intellectual commodification, I discovered the difficulties of developing a concrete and objective argument involving such abstract concepts as intelligence and knowledge. To overcome this obstacle, Professor Wilhite taught me to add validity to my argument by “forwarding” the works of others. Instead of using only isolated points for support, I drew on entire dogmas—such as Karl Marx’s principles of use- and exchange-values—as analytical frameworks from which to build. As the paper took shape through a series of revisions, I slowly arrived at my own argument: that intellectual commodification is both more subtle and more insidious than other forms of commodification. Subjecting intelligence to market forces threatens freedom itself.

# iSmart: The Commodification of Intelligence

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**T**he market has pervaded every aspect of capitalist life. Every item has a market price and every decision has an opportunity cost. Even those entities which have stubbornly resisted market forces are beginning to succumb to the pressure. A booming market for organ transplants has commodified the physical human body, while surrogate motherhood commercializes procreation. At the same time, more than 80,000 individuals are arrested annually for prostitution-related charges (Federal Bureau of Investigation). In a similar manner, the market has coercively commodified intelligence, an entity to which the laws of supply and demand were inherently unfamiliar and unnatural.

In the course between humans’ pre-Neolithic hunger-gatherer phase to its contemporary society of division of labor, many traits have been removed from the contexts in which they originally evolved. The body’s propensity to store energy, when paired with the abundance of food found in most nations today, has led to widespread obesity problems. Since indoor air conditioning and heating have turned hair into a purely aesthetic concern, individuals spend \$10 billion each year on hair-removing razors and razor blades (Sheets). Through the buying and selling of services and labor, human intelligence similarly finds itself displaced from its evolutionary context. Once used for self-preservation through food collection and predator evasion, intelligence is now commercialized similarly to tangible commodities, and this intellectual commodification presents an imposing threat to the ideals of socioeconomic equality.

In a capitalist society, knowledge has a discrete exchange value. That is, knowledge has a quantitative economic market value, expressible in monetary units (Marx 331). While it is not possible to isolate the financial impact of a single individual’s intelligence or academic achievements, a 2005 study by the United States Census Bureau



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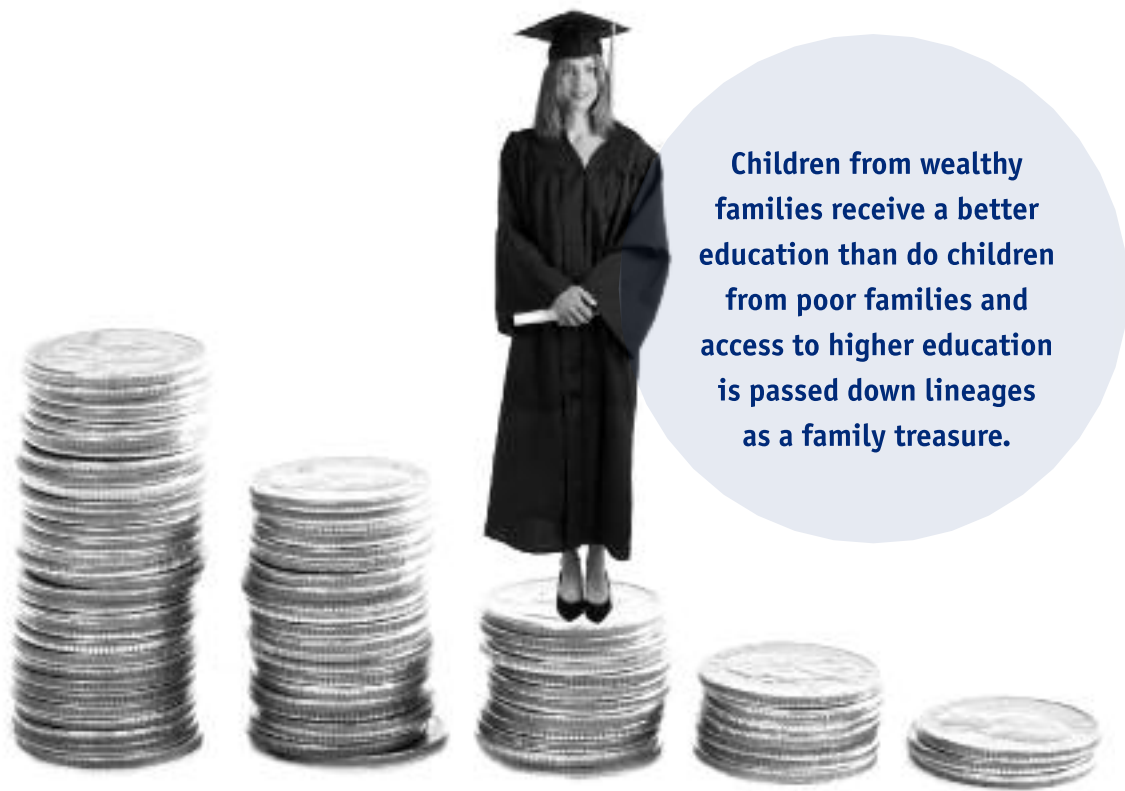
showed that “adults age 18 and older with a bachelor’s degree earned an average of \$51,554 in 2004, while those with a high school diploma earned \$28,645” (U.S. Bureau of Labor Statistics). Meanwhile, “those without a high school diploma earned an average of \$19,169” (U.S. Bureau of Labor Statistics). The differences among these figures suggest that the average yearly financial value of a high school diploma is nearly \$10,000, while that of a college degree is an additional \$20,000. While it may seem unfair to assume a direct correlation between intelligence and educational level, the assumption remains ubiquitous in the job market, as nearly all specialized jobs and positions require a certain degree or certification. Students aspiring to enter graduate school must first finish their bachelor’s degrees. Doctors from foreign countries wishing to practice must not only have completed medical school, but also have passed a re-certification exam. Disparities in intelligence among individuals, as indicated by their educational degrees, thus make intelligence extremely susceptible to commodification.

As a direct example, the market for tutoring is widely visible in secondary and higher education. Students can purchase academic assistance, and the tutor’s aid contributes to the student’s earning of the degree. A student who puts forth less effort into a course while paying for tutoring services may receive equal marks as another student who, without any assistance, would be required to contribute additional personal effort. In this case, though their academic transcripts suggest an equal exerted labor value, the first student effectively exchanges a

financial sum to replace intellectual effort. As a result, the economic value of educational labor manifests itself not only in the end-product of the labor, but also during the commitment of the labor leading up to the degree.

Aside from the interpersonal trading of intelligence, mental abilities have also been directly marketed as physical commodities. Pharmaceuticals for cognitive enhancement, called “nootropics” or “smart drugs,” present an alternative approach to intellectual commodification, introducing a market for chemical substances thought to directly enhance intelligence, memory, and mental performance without the commitment of any additional educational labor. While the actual effects of nootropic drugs are still unclear, some drugs, such as those derived from Ginkgo tree extracts, have been experimentally shown to induce “significant improvements in speed of information processing, working memory, and executive processing” in adults (Stough et al. 131). Nootropics have become popular among college students, drawing widespread ethical concerns analogous to those surrounding steroid use in professional sports. The controversy intensified when the use and trading of nootropics spread to include illegally procured prescription medications





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such as Adderall and Ritalin, which are normally administered only to those medically diagnosed with attention-deficit hyperactivity disorder (Trudeau). Such drugs typically operate by increasing blood flow or neurotransmitter release in the brain, thereby enhancing cognitive performance (Chudler). In this way, nootropic use transforms intelligence into a physically modifiable entity, making its commercialization and commodification even more direct.

Recent societal developments, especially the shift in the economic paradigm to value intellectual labor over physical labor, have enabled and catalyzed this widespread commodification. Technological advancements have displaced many skilled workers from jobs that require tactile dexterity, as machines replaced human unreliability with mechanical precision. Since artificial intelligence is still a long way from imitating or replacing the complexity of human intelligence (Brooks 1), the job market today values intelligence over physical skill and strength. In 2009, the U.S. Bureau of Labor Statistics projected a 13% decrease in the number of metal and plastic factory workers by 2018 (U.S. Bureau of Labor Statistics). Meanwhile, it predicted increases of 11% for engineers and 22% for physicians and surgeons. Contemporary descendants of pre-industrial craftsmen are now considered low-income unskilled labor. The economy has thus evolved to increase the use value, or general utility, of intelligence. It is this economic adjustment that drives students and professionals to use nootropics and tutoring services to gain an artificial edge in

today's escalated intellectual competition. Also, standardized tests and their ubiquity in academic admissions procedures further accelerated the commodification of intelligence, as they provided universal metrics with which to objectively quantify and compare intelligences.

Given the socioeconomic inequalities attached to the current educational system, the implications of intellectual commodification are especially alarming. College degrees have become a mark of personal competence, even in situations such as police enforcement where there exists no correlation between education and job performance (Truxillo et al. 269). The growing popularity and influence of a college degree in society has begun to emphasize the "exchange value" of intelligence more heavily than its "use value" (Ball 4).

The association between intelligence and education presents a problem to the economic paradigm of the work force. For instance, an electrical engineer earns a mean annual wage of \$86,250, while a farmer earns only \$19,780 (U.S. Bureau of Labor Statistics, Division of Occupational Employment Statistics). It is true that an electrical engineer has years of career-specific training; however, this training was most likely indoors comfortably seated at a desk. While an electrical engineer's education may have involved the "expenditure of human brain" and "nerves" (Marx 331), the total physiological output of productive activity is likely less than the total degree of physiological expenditure put forth in the years of appren-

ticeship and preparation necessary to train a competent farmer. Because it takes relatively little physiological effort for a child of a farmer to become an electrical engineer and thereby quadruple his or her projected yearly income, one would expect the growing disparity in economic demand for the two jobs to drive the labor supply toward the electrical engineers. Economic theory would then dictate that this shift in labor supply, when complete, would ultimately neutralize the wage disparities. However, the number of farmers in the U.S. is decreasing by only 2% per decade while the number of electrical engineers is increasing by only 1% (U.S. Bureau of Labor Statistics), rates far below those required to reach any wage equilibrium. Instead, wage disparity remains because access to knowledge and expertise is carefully safeguarded to prevent their dispersion and devaluation.

This guarded exclusiveness is not caused primarily by acts of malevolence; it is embedded in America's sociopolitical framework. The link between secondary education and college admissions creates a perpetual cycle of economic inertia: "because [public] education in this country is delivered through school districts based on residence, and residence is based largely on wealth, the structure of schooling in America is inseparable from the structure of class" (Hochschild and Scovronick 54). In the end, children from wealthy families receive a better education than do children from poor families (Hochschild and Scovronick 54), and access to higher education is passed down lineages as a family treasure. As a result, even though "minority-group enrollments at predominantly white institutions have increased sharply" as a result of affirmative action, "many groups are still not represented in numbers proportional to their share of the total population" (O'Neil 700). In addition, while for-profit internet colleges pivot on the concept of increasing accessibility to higher education, their recruitment efforts reiterate the image of higher education as an investment. University of Phoenix encourages you to "Invest in Yourself," while Strayer University echoes this call, urging you to "Invest in Your Future." These calls for self-investment invoke a sense of optimism, but they underline the fact that an initial input of wealth is required to yield any output of wealth in this society. The disparity in exchange value between expertise in electrical engineering and in farming is not due to the difference in the labor expended to acquire the expertise, but rather

to the exclusiveness and inaccessibility of the expertise. It simply costs more to become an electrical engineer.

Unfortunately, the maintenance of this exclusiveness continues far beyond the classroom. In industries dependant on intellectual commodification, experts "are often better informed than the clients who hire them and may exploit this informational advantage" (Levitt and Syverson 599). In these fields, well-educated professionals use their expertise to gain a financial advantage over less-educated individuals, thereby perpetuating the inter-generational cycle of educational inheritance. In neuroscience, ethical issues have appeared involving "neuro-realism," the blind confidence that the public often puts into pseudo-discoveries that are coupled with brain scan images but are based on erroneous assumptions.

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Popular articles featuring seemingly-legitimate fMRI and PET imaging results have drawn conclusions without regard to the inherent limitations of each scanning technique (Racine et al. 160). In 1999, after researchers found that acupuncture caused inconsistent changes to patients' brain response to pain, the *Washington Post* deceptively claimed that the results proved the validity of acupuncture (161). This abuse of neuroscience becomes even more threatening in "neuro-policy," where institutions leverage neuro-realism to influence policy-making (161). In 2004, the Lighted Candle Society, a non-profit organization dedicated to promoting moral values, attempted to use fMRI to prove that pornography is addictive (Bacon). While the inherently ambiguous nature of fMRI severely limits the extent to which such conclusions can be made, the public is largely unaware of these limitations. In industries where knowledge can produce financial or strategic advantages, educated and trained professionals often use their expertise for their personal self-interest, even at the expense of the greater public.

The commodification of intelligence appears in many forms, from academic services to cognitive enhancers. This commodification raises disturbing implications when it allows for a never-ending intergenerational cycle. In this cycle, the parents' financial affluence translates into a child's educational success which in turn

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converts back into the child's own financial prosperity. Intellectual commodification enables these money-education conversions while maintaining the exclusiveness that prevents low-income families from entering the cycle, thereby perpetuating the socioeconomic disparities evident today.

As society continues to commercialize previously immune facets of life, from human organs to love and marriage to intelligence, we run the risk of losing our freedom. Intellectual commodification carries macroscopic implications even more dire than those of its predecessors. When the laws of supply and demand dictate the value of intelligence, its price, quantity, and, most importantly, its nature and variety are set by the market. If only the wealthiest of corporations can "afford" intelligence, society will be ruled by apathetic short-term profitability. Dissent and free thought—foundational elements of a robust democracy—will decline. Industries that depend on personal empathy and compassion, from volunteer medical services to environmental lobbying, will suffer. In short, the commodification of intelligence puts us on the road to dictatorship. Only a systemic approach to solving this problem will suffice. Decades ago, an earnest, hard-working individual may have been deprived of a prosperous living by race or religion. Today, often only a lack of wealth stands in the way. The United States was founded on the promise of equal rights for all. We have traveled on a long, bumpy road to achieving that equality, but there are many miles yet to cover. Eliminating the effects of intellectual commodification is the next step on that journey. ■

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